

REMARKS

In the outstanding Office action, claims 12-19, 21 and 23-29 were presented for examination. Claims 12-19, 21 and 23-27 were rejected. Claims 28-29 were withdrawn from consideration.

In this amendment, applicant has amended claims 12, 18, 24 and 27 and has added new claim 30 more particularly pointing out the invention. Claims 28-29 have been cancelled, without prejudice. Accordingly, claims 12-19, 21 and 23-27 are now pending for examination and, as will be discussed in detail below, it is believed that the application is in condition for allowance.

Claim Amendments

Claim 12 has been amended to recite that 3-dimensional globular domains are absent from the gelatine-like protein employed in the claimed process. Support for this amendment can be found at page 8, lines 9-12 of applicant's specification.

Claim 12 has been further amended to recite that more than 75% of the RGD-enriched gelatine-like protein employed in the claimed process has a uniform molecular weight. Support for this amendment can be found at page 5, lines 1-2 of applicant's specification.

The amendments made to claim 12 are made to help expedite prosecution, without acquiescing in the rejection.

Claim 18 has been amended, without narrowing, for consistency with amended claim 12.

Claim 24 has been amended to delete the term "essentially".

A minor amendment has been made to claim 27 for consistency with claim 12 as claim 12 is now amended.

Claims 28-29 have been cancelled, without prejudice.

New claim 30 recites a group of values that the uniform molecular weight proportion of the RGD-enriched gelatine-like protein employed in the process claimed in claim 18 can have. Support for this amendment can be found at page 5, lines 1-4 of applicant's specification.

Withdrawal of Rejections

The withdrawal of the art-based rejections, as set forth in the Office action is appreciated by applicant.

Claim Rejections - 35 U.S.C. § 112 Second Paragraph

Claim 24 was rejected as allegedly being indefinite under 35 U.S.C. § 112, second paragraph, because of the use of the term "essentially" in claim 24. In response, the term "essentially" has been cancelled, pursuant to the suggestion for acceptable wording of claim 24 appearing in the Office action, which suggestion is appreciated by applicant. Withdrawal of the rejection of claim 24 is accordingly respectfully requested.

Applicant believes that a person of ordinary skill in the art will understand that the process claimed in amended claim 24 may employ a gelatine-like protein having a small proportion of hydroxyproline residues, if doing so is consistent with the teaching in applicant's specification, noting the requirement described at page 6, lines 10-12 thereof.

Claim Rejections - 35 U.S.C. § 112 First Paragraph

Claims 12-19, 21 and 23-27 were rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the written description requirement.

In support of the rejection, the Office action notes that "the features upon which applicant relies (i.e. absence of 3-dimensional globular domains) are not recited in the rejected claim(s)." Further, the Office action states that "The issue in this case is the breadth of the claims in light of the predictability in the art...etc."

In reply to this rejection, Applicant respectfully submits that applicant's specification describes the invention now claimed in amended claim 12 in sufficient detail that a person of ordinary skill in the art will conclude that applicant was in possession of the invention, commensurate in scope with claim 12, at the date of the application.

To this end, applicant has amended claim 12 to recite that 3-dimensional globular domains are absent from the gelatine-like protein employed in the claimed process. This amendment is believed to overcome the objection that the features upon which applicant relies are not recited in the rejected claims. Furthermore, the amendment reduces the breadth of claim 12, enhances the expectation of success in practicing the claimed invention, and thus positively addresses what is described in the Office action as being "the issue in this case", applicant believes.

It appears from the Office action that the Office understood claim 12, as it read before this amendment, possibly to have included proteins having globular domains. This possibility has now been removed by the amendment to claim 12 which excludes from use in the claimed process proteins having globular domains. As can be understood from applicant's specification at page 3, lines 15-17, the proteins having globular domains that are to be excluded comprise proteins associated with clustering of microcarrier beads.

Accordingly applicant respectfully submits that, as a result of this amendment alone, the invention claimed in claim 12 complies with the written description requirement of 35 U.S.C. § 112, and that claim 12 is therefore allowable.

In addition to the amendment to exclude the use of proteins having globular domains, claim 12 has been further amended to recite that more than 75% of the gelatine-like protein has a uniform molecular weight.

In naturally occurring gelatines the molecular weight is generally non-uniform. Natural gelatines may comprise long molecule species, for example species having a molecular weight above about 400 kDa, that can play a role in microcarrier bead clumping. Clumping is an undesired effect to be avoided in the claimed process for the preparation of a cell culture support. Employment of proteins having a uniform molecular weight, as defined in the process claimed in claim 12, from which proteins such long molecule species are absent, can help prevent clumping of microcarriers.

The detailed discussion of the role of molecular weight in relation to the problem of clumping which appears at page 4, line 1 to page 5, line 9 and at page 5, lines 21-29 of applicant's specification, helps to show that a person of ordinary skill in the art can practice the claimed invention commensurate in scope with claim 12, as now amended, and obtain the desired result of avoiding clumping, by employing proteins that largely have a uniform molecular weight, applicant believes.

Thus, the further amendment of claim 12 reduces the breadth of claim 12 by requiring that the proteins employed are largely uniform molecular weight proteins, reduces the modifications that can be made within the scope of claim 12, and therefore increases the predictability of obtaining the desired biological result. Accordingly, this additional amendment of claim 12 provides still further reason why amended claim 12

complies with the written description requirement and is therefore allowable, applicant believes.

Reconsideration and allowance of amended claim 12 are respectfully requested.

Dependent Claims

Claims 13-19, 21, 23-27 and 30 all depend either directly or indirectly from claim 1, and are therefore believed allowable with claim 1 for the reasons that claim 1 is believed allowable. Dependent claims 13-19, 21, 23-27 and 30 are furthermore believed compliant with the written description requirement and therefore allowable, by reason of the additional limitation or limitations each claim recites.

For example, Claim 18 specifically recites that more than 75% of the gelatine-like protein has a molecular weight within 2% of a selected molecular weight, providing additional reasons why claim 18 is compliant with the written description requirement. The breadth of claim 18 is still less than that of amended claim 12 and the predictability of result is further enhanced, applicant believes.

Also, claim 27 specifically recites that the gelatine-like protein comprises a single polypeptide chain, that the uniform molecular weight lies within the narrow range of 2% of a selected molecular weight and that the selected molecular weight is within the narrow band of from than 60 kDa to less than about 150 kDa. These limitations provide additional reasons why claim 27 is compliant with the written description requirement. The breadth of claim 27 is still less than that of amended claim 12 and the predictability of result is further enhanced, applicant believes.

Still further reasons for the allowability of applicant's claims, as they are now amended, should further reasons be needed (and applicant does not believe that they are), can be found in applicant's Amendment filed 21 August 2008.

In the event that the Office does not fully agree with applicant's submissions herein as to the allowability of applicant's amended claims, the Office is respectfully requested to act constructively and to indicate potentially allowable subject matter, pursuant to MPEP 707.07(j)II in any future action, or by telephone to the undersigned.

Conclusion

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the instant application, as amended, is in condition for allowance. Favorable reconsideration and allowance are earnestly solicited. If for any reason the Examiner feels that consultation with applicant's representative would be helpful in the advancement of the prosecution, the Examiner is invited to contact the undersigned practitioner.

Respectfully submitted,

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